



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,485	11/20/2001	Mark E. Tuttle	MI40-337	8903

21567 7590 07/03/2003

WELLS ST. JOHN ROBERTS GREGORY & MATKIN P.S.  
601 W. FIRST AVENUE  
SUITE 1300  
SPOKANE, WA 99201-3828

EXAMINER

TANG, SON M

ART UNIT	PAPER NUMBER
----------	--------------

2632

DATE MAILED: 07/03/2003

3

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/988,485

Applicant(s)

TUTTLE, MARK E.

Examiner

Son M Tang

Art Unit

2632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 66-90 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 66-90 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other:  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims **66-69, 71 and 74** are rejected under 35 U.S.C. 102(e) as being anticipated by **Smithgall et al.** [US 5,995,048].

**Regarding to claim 66:** Smithgall discloses a communication device comprising:  
-a ground plane [420]; and antenna in formed of a metallic plate [410] spaced apart from and interacting with the ground plane by substrate [440] [see Fig. 5];  
-an integrated circuit (met by components 302 to 308) coupled with the antenna [301] in formed of metallic plate [410], the IC including a modulator [307] configured to communicate using radio frequency backscatter communications [see Fig. 3-5 and col. 3, lines 38-68 to col. 4, lines 1-24 and 64-68].

**Regarding to claim 67:** Smithgall et al. further disclose a dielectric layer [440] intermediate the ground plane and the antenna.

**Regarding to claims 68, 74:** Smithgall et al. further disclose that the integrated circuit comprises radio frequency identification (RFID) communication circuitry [as shown in Fig. 3, col. 3, lines 38-50].

**Regarding to claim 69:** Smithgall discloses a communication device comprising:

- a ground plane [420]; and antenna in formed of a metallic plate [410] spaced apart from and interacting with the ground plane by substrate [440] and being substantially electrically insulated from the ground plane [see Fig. 5];
- an integrated circuit (ASIC) [304] coupled with the antenna [301] in formed of metallic plate [410], the IC including a receiver (met by detector modulator 302) [see Fig. 3-5 and col. 3, lines 38-68 to col. 4, lines 1-24 and 64-68]; and
- an encapsulant configured to form a housing [cited in col. 5, lines 22-25].

**Regarding to claim 71:** Smithgall further discloses the modulator [307] configured to communicate using backscatter communications [cited at col. 3, lines 62 to col. 4, lines 1-12].

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2632

4. Claims **70, 72, 75-90** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Smithgall** [US 5,995,048].

**Regarding to claims 70, 73:** Smithgall disclose all the limitation as described above, Smithgall does not specifically disclose that an encapsulant encapsulates and contacts the antenna and the integrated circuit, however, Smithgall disclosed that the entire tag assembly which includes antenna and integrated circuit are being encapsulated with non-conducting material [col. 5, lines 17-25]. Thus, it would have been obvious in skill of the art that one would recognize that the antenna and the IC are being encapsulated.

**Regarding to claim 72:** Smithgall disclose all the limitation as described above, Smithgall does not specifically disclose that a power source coupled with the integrated circuit and the ground plane. Smithgall disclosed that battery [310] provides power to the circuit of the tag [col. 4, lines 11-12], which includes the antenna. Thus, it would have been obvious of one having ordinary skill in the art would recognize that the battery 310 is coupled to the integrated circuit [302-308] and the ground plane, since the tag circuitry is coupling to antenna, and wherein the antenna is connect with ground plane [see Fig. 4].

**Regarding to claim 75:** Smithgall discloses a communication device comprising:

- an integrated circuit (met by components 302-308);
- an antenna [301];
- a ground plane [420] spaced from the antenna and configured to shield electromagnetic to and from the antenna [as cited in last paragraph of Summary], Smithgall et al. does not specifically disclose that the ground plane electrically couple with a terminal of a power source. Smithgall disclosed that battery [310] provides power to the circuit of the tag as cited in col. 4,

Art Unit: 2632

lines 11-12, which means that the antenna coupled to the IC circuitry. Thus, it would have been obvious of one having ordinary skill in the art would recognize that the battery 310 is coupled to the ground plane, since the tag circuitry is coupling to antenna, and wherein the antenna is connecting to ground plane [see Fig. 4].

**Regarding to claim 76:** Smithgall et al. further disclose a ground configured to isolate and reflect the electromagnetic signals from/to patch antenna as cited in summary of the invention.

**Regarding to claim 77:** Smithgall et al. further disclose that the integrated circuit (302-308) is configured to implement radio frequency identification (RFID) communication circuitry [as shown in Fig. 3, col. 3, lines 38-50].

**Regarding to claim 78:** Smithgall et al. further comprising the power source [310] for providing power to the tag, which includes all the integrated circuit.

**Regarding to claims 79-90:** The claimed method steps are interpreted and rejected as rejection stated above.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Siwiak et al. [US 5,410,749] and Guthrie et al. [US 6,049,278].

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son M Tang whose telephone number is (703)306-5970. The examiner can normally be reached on 4/9 First Friday off.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J Wu can be reached on (703)308-6730. The fax phone numbers for the

Art Unit: 2632

organization where this application or proceeding is assigned are (703)305-3988 for regular communications and (703)305-3988 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

Son Tang  
June 18, 2003

  
DANIEL J. WU  
PRIMARY EXAMINER  
6/26/03